

REMARKS

The Office Action of August, 2005 has been received and carefully reviewed. In response, claims 8 and 30 have been amended, whereby claims 1-34 and 36-40 remain pending in the application. Applicant notes with appreciation the indications in the Office Action that claims 2-6, 18-34, and 36-40 are allowed and that the objections to the abstract and claims in the previous Office Action have been withdrawn. The Office Action included objections to claims 8 and 30 based on informalities that have been addressed by the above amendment, as well as rejections of claims 1, 7, 8, 10-12, and 14-17 under 35 U.S.C. § 103, which are addressed below. In addition, Applicant notes the indication that claims 9 and 13 include allowable subject matter. Reconsideration of the pending claims is respectfully requested in view of the above amendment and the following remarks.

I CLAIM OBJECTIONS

Claims 8 and 30 were objected to for informalities. In the above amendment, claim 8 has been amended to remove the extraneous occurrence of the term "I" in accordance with the suggestion in the Office Action. In addition, claim 30 was amended to change "herein" to "wherein" as noted in the Office Action. The above amendment is believed to address the outstanding claim objections and reconsideration of the amended claims is requested.

II REJECTION OF CLAIMS 1, 7, 9, 11, 19, AND 31-34 UNDER 35 U.S.C. § 103

Claims 1, 7, 8, 10-12, and 14-17 were rejected under 35 U.S.C. § 103 as being unpatentable over Migliori 6,844,722 in view of Linder 5,059,902. Reconsideration and withdrawal of these claim rejections is respectfully requested for at least the following reasons.

Rejected independent claims 1, 8, 12, and 14, as well as claims 7, 10, 11, and 15-17 depending therefrom involve measurement of welding wire *traveling along a path*, in which an induction coil is provided *surrounding the path*. This feature is neither taught nor suggested by Migliori, which instead relates to static measurements with coils placed in fixed positions on or around the metallic sheet or economizer tube (i.e., no relative movement between the measured pipe and the coil). Likewise, Linder fails to teach or suggest measurement of moving structures or liquids, whereby the proposed combination of Migliori with Linder fails to teach or suggest each and every element of claims 1, 7, 8, 10-12, and 14-17. In this regard, Linder provides DC excitation current to a coil and then switches the supply voltage off, after which the material property is

measured by sensing the amount of time in which the magnetic field in the tested material decays and the induced coil voltage resulting from the field decay. Since this form of measurement is essentially a measurement of the magnetic field response to a step-change, the aspects of Linder appear to be inoperable and inapplicable with respect to a moving measured material. Consequently, a person of ordinary skill in the art would have no reasonable expectation of success and hence no motivation for attempting to combine Linder with Migliori or any other reference in the context of apparatus for testing moving welding wire. Moreover, there is no suggestion, motivation, or reasonable expectation for attempting the proposed combination, as Linder appears to teach away from the use of AC excitation. Thus, the subject matter of rejected claims 1, 7, 8, 10-12, and 14-17 is patentably distinct from the proposed combination of Migliori and Linder, whereby reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 is requested.

III ALLOWABLE SUBJECT MATTER

Claims 9 and 13 were indicated as containing allowable subject matter. These claims were also objected to for being dependent upon a rejected claim in the Office Action, which further indicated that claims 9 and 13 would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. However, the corresponding independent claims 8 and 12 are believed to be allowable as discussed above, and claims 9 and 13 are therefore believed to be in condition for allowance in dependent form, wherein reconsideration and withdrawal of the objections thereof is respectfully requested.

IV CONCLUSION

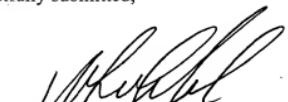
For at least the above reasons, the currently pending claims 1-34 and 36-40 are believed to be in condition for allowance and notice thereof is requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 06-0308, LEEE200324.

Respectfully submitted,

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CERTIFICATE OF MAILING (37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

By: Kristi A. Murphy
Date: Sept. 1, 2005